# APPENDIX II:

THE AMENDED CLAIMS (clean version):

1. (*canceled*)

2. (*canceled*)

3. (*canceled*)

4. (*canceled*)

5. (*canceled*)

6. (*canceled*)

7. (*canceled*)

8. (*currently amended*) A process for polymerization or copolymerization of olefins, in which olefins are polymerized in the presence of the following components:

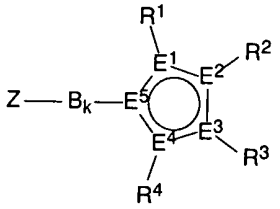
(A) a substituted monocyclopentadienyl, monoindenyl, monofluorenyl or heterocyclopentadienyl complex of formula (I)

I,

in which the variables have the following meaning:

M is chromium, molybdenum or tungsten,

Y is described by formula II



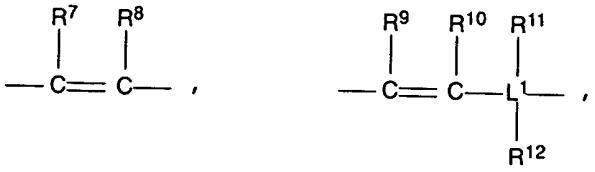
II

in which the variables have the following meaning:

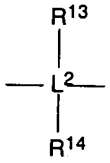
$E^1$-$E^5$ are carbon or at maximum one of $E^1$ to $E^5$ is phosphorus or nitrogen,

Z is $NR^5R^6$, $PR^5R^6$, $OR^5$, $SR^5$, or an unsubstituted, substituted or condensed, partially unsaturated heterocyclic or heteroaromatic ring system,

B is one of the following groups:



and additionally, if Z is an unsubstituted, substituted or condensed, partially unsaturated heterocyclic or heteroaromatic ring system, B can also be



in which

$L^1$, $L^2$ denotes silicon or carbon,

k denotes 1, or if Z is an unsubstituted, substituted or condensed, partially unsaturated heterocyclic or heteroaromatic ring system, is also 0,

X independently of one another fluorine, chlorine, bromine, iodine, hydrogen, $C_1$-$C_{10}$ alkyl, $C_2$-$C_{10}$ alkenyl, $C_6$-$C_{20}$ aryl, alkylaryl with from 1 to 10 C atoms in the alkyl radical and from 6 to 20 C atoms in the aryl radical, $NR^{15}R^{16}$, $OR^{15}$, $SR^{15}$, $SO_3R^{15}$, $OC(O)R^{15}$, CN, SCN, β-diketonate, CO, $BF_4$-, $PF_6$-, or bulky non-coordinating anions,

$R^1$-$R^{16}$ independently of one another hydrogen, $C_1$-$C_{20}$ alkyl, $C_2$-$C_{20}$ alkenyl, $C_6$-$C_{20}$ aryl, alkylaryl with from 1 to 10 C atoms in the alkyl radical and from 6 to 20 C atoms in the aryl radical, $SiR^{17}_3$, in which the organic radicals $R^1$-$R^{16}$ can also be substituted by halogens, and two geminal or vicinal radicals $R^1$-$R^{16}$ can also be joined to a 5- or 6-membered ring,

$R^{17}$ independently of one another hydrogen, $C_1$-$C_{20}$ alkyl, $C_2$-$C_{20}$ alkenyl, $C_6$-$C_{20}$ aryl, alkylaryl with from 1 to 10 C atoms in the alkyl radical and from 6 to 20 C atoms in the aryl radical, and two geminal radicals $R^{17}$ can also be joined to a 5- or 6-membered ring,

n is 1, 2 or 3,

m is 1, 2 or 3,

(B) optionally, one or more activator compounds, and

(C) one or more additional catalysts conventionally used for the polymerization of olefins.

9. (*original*) The process of claim 8, in which the activator compound (B) is a compound selected from the group of aluminum oxane, dimethylanilinium tetrakispentafluorophenyl borate, trityltetrakispentafluorophenyl borate, or trispentafluorophenylborane.

10. (*currently amended*) The process of claim 8, in which at least one olefin selected from the group of ethene, propene, 1-butene, 1-pentene, 1-hexene, 1-heptene, 1-octene and 1-decene is polymerized.

11. (*currently amended*) The process of claim 8, in which an olefin selected from the group of propene, 1-butene, 1-pentene, 1-hexene, 1-heptene and 1-octene is polymerized.

12. (*original*) The process of claim 8, in which the polymerization is conducted in suspension, in solution, or in the gas phase.

13. (*original*) Polymers of olefins, obtainable by the method of claim 8.

14. (*original*) Fibers, films and moldings, containing polymers of olefins of claim 13 as essential components.

15. (*new*) The process of claim 8, in which M is chromium.

16. (*new*) The process of claim 8, in which Z is an unsubstituted, substituted or condensed heteroaromatic ring system.

17. (*new*) The process of claim 8, in which $E^1E^2E^3E^4E^5$ together with $R^1R^2R^3R^4$ is unsubstituted or substituted indenyl.

18. (*new*) The process of claim 8, in which component (C) comprises at least one conventional olefin polymerisation catalyst selected from the group consisting of Ziegler-Natta catalysts, Phillips catalysts, metallocenes, constrained geometry complexes, nickel and palladium bisimine catalyst systems, iron and cobalt pyridine bisimine compounds and chromium amides.

19. (*new*) The process of claim 8, in which component (A) and/or component (C) is immobilized on an organic or inorganic support.

20. (*new*) The process of Claim 8, in which component (C) is used for the in situ preparation of comonomers.